

14th European Polar Low Working Group meeting
Workshop on ‘Polar lows and mesoscale weather extremes’
5-6 April 2018, Trier, Germany

Location:

University of Trier, Behringstr. 21, 54296 Trier, Germany (Campus 2, room H11)

Program (updated 4 April 2018)

Thursday 5 April

09:00 - 09:20	Welcome and Opening
Session 1 : Polar Low studies using satellite data and in-situ data	
09:20 - 09:40	Comparative analysis of winter and summer mesocyclogenesis over the Sea of Japan GURVICH, I.A.; PICHUGIN , M.K.
09:40 - 10:00	Infrasonic signatures of polar lows – comparing a decade of polar low tracks to infrasonic detections NÅSHOLM, S.P.; ASSINK, J.D.; BLANC, E.; BLIXT , E.M.; CLAUD, C.; GIBBONS, S.J.; HAUCHECORNE, A.; KERO, J.; LE PICHON, A.; NOER, G.; POL-TIREAU, K.; ROJO, M.; SMETS, P.S.
10:00 - 10:20	In situ measurements of surface winds, waves and sea state in polar low events ROJO, M.; CLAUD , C.; NOER, G.; CARLETON, A.
10:20 - 10:40	Polar Lows and Medicanes: Differences and similarities DAFIS , S.; CLAUD, C.
10:40 - 11:00	Coffee break
Session 1 continued	
11:00 - 11:20	Characteristics of severe weather systems over the Chukchi Sea from satellite measurements and reanalysis datasets PICHUGIN , M.K.; GURVICH, I.A.; ZABALOTSKIH, E.V.
11:20 - 11:40	Automatic Detection of Polar Mesocyclones using Satellite Microwave Humidity Sounders MELSHEIMER , C.
11:40 - 12:00	A proposed airborne and ground-based field campaign to study cold-air outbreaks and polar lows GEERTS , B.
Session 2 : Climatological Aspects of Polar Lows	
12:00 - 12:20	Southern Ocean polar mesocyclones as simulated in the WRF high resolution hindcast VEREZEMSKAYA , P.; STEPANENKO, V.; GULEV, S.
12:20 - 13:30	Lunch

Session 2 continued	
13:30 - 13:50	An objective global climatology of polar lows based on reanalysis data STOLL, P. ; GRAVERSEN, R.G.; NOER, G.; HODGES, K.
13:50 - 14:10	Polar Mesoscale Cyclone Climatology for the Nordic Seas based on the ERAInterim Reanalysis MICHEL, C.; TERPSTRA, A. ; SPENGLER, T.
14:10 - 14:30	Investigation of Januaries polar lows genesis conditions between 2003 and 2011 using Arctic System Reanalysis (ASR) RADOVAN, A. , CREWELL, R.S; RINKE, A.; KNUDSEN, E.M.
14:30 - 14:50	Polar lows from a downscaled climate model ensemble – variability, trends and relation to sea ice LANDGREN, O. ; SEIERSTAD, I.; SELAND, Ø.; HAUGEN, J.E.; IVERSEN, T.
14:50 - 15:10	Coffee break
Session 3 : Polar Lows in Reanalyses and Model Simulations	
15:10 - 15:30	A comparison of polar low representation between ECMWF global models and Arome Arctic limited area model HALLERSTIG, M.
15:30 - 15:50	Modification of polar low development by sea ice and the orography of Svalbard SERGEEV, D.E.; RENFREW, I.A., SPENGLER, T.
15:50 – 16:10	Investigation on Polar lows response to climate change in a high resolution global climate model BRESSON, H. ; SHAFFREY, L.; HODGES, K.; ZAPPA, G.
16:10 - 16:30	Influence of surface fluxes on polar low development: idealised simulations TERPSTRA, A. ; SPENGLER, T.
16:45 - 17:30	Social event (visit of the art laboratory Trier, complimentary)
20:00 -22:00	Dinner (complimentary) Directions will be given during the workshop.

Friday 6 April

Session 4 : Environments for Polar Low Genesis and Operational Aspects	
09:00 - 09:20	Energy and helicity dynamics of Polar Lows VAZAEVA, N.V. , O.G. CHKHETIANI, M.V. KURGANSKY, L.O. MAXIMENKOV
09:20 - 09:40	Characteristics and synoptic environment of Polar Lows over the Barents Sea CLAUD, C. ; VICOMTE, M.; ROJO, M.; MALLETT, P.-E.; NOER, G.
09:40 - 10:00	A methodology for identification and classification of polar lows at the MET-Norway NOER, G.
Session 5 : Polar Mesoscale Weather Phenomena and AOI	
10:00 - 10:20	Characteristics of Explosive Cyclones over the Northern Pacific ZHANG, S. ; FU, G. ; CHUNGU, L. ; JINGWU, L.
10:20 - 10:40	Short oral poster presentations (3 min)
10:40 - 11:10	Poster viewing and coffee break
11:10 - 11:30	Analyses of Explosive Cyclones over the Northern Hemisphere from 1979 to 2016 SUN, Y. ; FU, G.
11:30 - 11:50	Analyses and Numerical Tests of an Explosive Cyclone over the Northwestern Pacific LI, P. ; SUN, B. ; FU, G. ; SUN, Y.
11:50 - 12:10	State and perspectives of the concept of large-scale conditioning of coastal weather extremes for deriving forecasts and statistics of such phenomena VON STORCH, H. ; ZAHN, M. ; CAVICCHIA, L. ; LI, D.
12:10 - 12:30	Wind gust forecasting methods – an overview SUOMI, I.
12:30 - 13:30	Lunch and poster viewing
Session 5 continued	
13:30 - 13:50	A Lagrangian Climatology of Wintertime Cold Air Outbreaks in the Irminger and Nordic Seas and Their Role in Shaping Air–Sea Heat Fluxes PAPRITZ, L. ; SPENGLER, T.
13:50 - 14:10	The Role of Coastline and Orography in the Formation of Convergence Zones in Cold Air Outbreaks WATANABE, S.I. , NIINO, H. , SPENGLER, T.
14:10 - 14:30	A study of a boundary layer front near Svalbard using aircraft measurements and numerical model simulations HEINEMANN, G. ; SCHEFCZYK, L.
14:30 - 14:50	Future research programmes related to PLs and mesoscale weather extremes
14:50 - 15:10	Poster viewing and coffee break
15:10 - 16:00	Discussion and closing remarks

Posters

Li, Yu; **Fu, G.**: Analyses of a Pair of Explosive Cyclones over the Northwestern Pacific in December 2014

Pang, H.; **Fu, G.**: Case Study of Potential Vorticity Tower in Three Explosive Cyclones over Eastern Asia

Zhang, X.; **Fu, G.**: Analyses of a Remarkable Explosive Cyclone over the Northeastern Pacific in December 2006

Chen, L.J.; **Fu, G.**: Analyses of 'Eye' of an Explosive Cyclone over the Northwestern Pacific in January 2015

Vazaeva, N., **Akperov, M.G.**; **Dembitskaya, M.A.**; **Mokhov, I.I.**; **Rinke, A.**: Lapse-rate feedback assessment in the Arctic from reanalysis data and model simulations

Participants without presentations

Chelsea Parker (Brown University)
Sascha Willmes (University of Trier)

Cancelled

Atmospheric response to the representation of the sea-ice lead structure in the Marginal Ice Zone
BATRAK, Y., **MUELLER**, M.

Impact of model resolution on the representation on the air-sea interaction associated with the North Water Polynya **MOORE**, G.W.K. ; VÅGE, K.